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=> d his

     (FILE 'HOME' ENTERED AT 16:42:22 ON 11 JAN 2005)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 16:43:17 ON 11 JAN 2005
L1            19 S PFTAIRE (A)KINASE?
L2             8 S HUMAN AND L1
L3        422038 S SERINE OR THREONINE
L4         44212 S L3 (A)KINASE?
L5            51 S "PFTAIRE"
L6             8 S L4 AND L5
L7            20 DUP REM L5 (31 DUPLICATES REMOVED)
L8       6866200 S CLON? OR EXPRESS? OR RECOMBINANT
L9       4916861 S NEURON? OR NERV?
L10        25404 S L4 AND L8
L11         2385 S L9 AND L10
L12            8 S L5 AND L11
L13            2 DUP REM L12 (6 DUPLICATES REMOVED)
                 E YAN C/AU
L14         1084 S E3
                 E KETCHUM K A/AU
L15          230 S E3
                 E DIFRANCESCO V/AU
L16          116 S E3-E4
                 E BEASLEY E M/AU
L17          318 S E3
L18         1520 S L14 OR L15 OR L16 OR L17
L19            7 S L4 AND L18
L20            7 DUP REM L19 (0 DUPLICATES REMOVED)
L21            0 S L5 AND L18

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                   STN Express with Discover!
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 NEWS  7  DEC 09   12 databases to be removed from STN on December 31, 2004
 NEWS  8  DEC 15   MEDLINE update schedule for December 2004
 NEWS  9  DEC 17   ELCOM reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  10 DEC 17   COMPUAB reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  11 DEC 17   SOLIDSTATE reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  12 DEC 17   CERAB reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  13 DEC 17   THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB
 NEWS  14 DEC 30   EPFULL: New patent full text database to be available on STN
 NEWS  15 DEC 30   CAPLUS - PATENT COVERAGE EXPANDED
 NEWS  16 JAN 03   No connect-hour charges in EPFULL during January and
                   February 2005
 NEWS  17 JAN 11   CA/CAPLUS - Expanded patent coverage to include Russia
                   (Federal Institute of Industrial Property)

 NEWS EXPRESS  JANUARY 10 CURRENT WINDOWS VERSION IS V7.01a, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 10 JANUARY 2005

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=> file medline embase biosis biotechds scisearch hcaplus ntis lifesci
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FILE 'LIFESCI' ENTERED AT 16:43:17 ON 11 JAN 2005
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=> s pftaire (a)kinase?
L1          19 PFTAIRE (A) KINASE?

=> s human and l1
   7 FILES SEARCHED...
L2           8 HUMAN AND L1

=> d 1-8 ibib ab

L2   ANSWER 1 OF 8     MEDLINE on STN
ACCESSION NUMBER:   2002329446     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 12072416
TITLE:              A novel TRH-PFTAIRE protein kinase 1 pathway in the
                    cerebellum: subtractive hybridization analysis of
                    TRH-deficient mice.
AUTHOR:             Hashida Tetsu; Yamada Masanobu; Hashimoto Koshi; Shibusawa
                    Nobuyuki; Monden Tsuyoushi; Satoh Teturou; Mori Masatomo
CORPORATE SOURCE:   First Department of Internal Medicine, Gunma University
                    School of Medicine, Maebashi, Japan.
SOURCE:             Endocrinology, (2002 Jul) 143 (7) 2808-11.
                    Journal code: 0375040. ISSN: 0013-7227.
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH:        200207
ENTRY DATE:         Entered STN: 20020620
                    Last Updated on STN: 20020726
                    Entered Medline: 20020725
AB   TRH has been reported to possess several neurophysiological actions in the
     brain.  To gain insights into the molecular mechanisms underlying these
```

effects, particularly in the cerebellum, we attempted to clone a cDNA that was regulated by TRH using TRH knockout mice and subtractive cDNA analysis. Over 100 clones obtained by subtractive hybridization analysis between the wild-type and TRH-1-cerebellum were analyzed. Four clones among them were identical and cdc2-related **kinase** (**PFTAIRE** protein kinase 1 (PFTK1)) cDNA, which was previously reported to be expressed only in the brain and testis. PFTK1 mRNA levels in the euthyroid TRH-1- cerebellum supplemented with thyroid hormone were significantly decreased compared with those in the wild-type. Induction of PFTK1 mRNA by TRH was also observed in a time- and dose-dependent manner in **human** medulloblastoma-derived HTB-185 cells that expressed TRH receptor subtype I mRNA. In addition, treatment of 8-Br-cGMP significantly increased PFTK1 mRNA levels, and a specific inhibitor of cGMP production, ODQ, completely blocked TRH-induced expression of PFTK1 mRNA. Furthermore, induction of PFrK1 mRNA by TRH was significantly inhibited by a NOS specific inhibitor, L-NAME, but not by a MEK inhibitor, PD98059 or a calcium channel inhibitor, nimodipine. These findings demonstrated, for the first time, a novel pathway between a neuropeptide and a cell cycle related peptide in the brain, and PFTK1 may be a key regulator for TRH action in t he cerebellum through t he NO-cGMP pathway.

L2 ANSWER 2 OF 8 EMBASE
on STN

ACCESSION NUMBER: 2002233972 EMBASE

TITLE: A novel TRH-PFTAIRE protein kinase 1 pathway in the cerebellum: Subtractive hybridization analysis of TRH-deficient mice.

AUTHOR: Hashida T.; Yamada M.; Hashimoto K.; Shibusawa N.; Monden T.; Satoh T.; Mori M.

CORPORATE SOURCE: Dr. M. Yamada, First Dept. of Internal Medicine, Gunma University School of Medicine, 3-39 Showamachi, Maebashi, Gunma 371-8511, Japan. myamada@med.gunma-u.ac.jp

SOURCE: Endocrinology, (2002) 143/7 (2808-2811).
Refs: 20
ISSN: 0013-7227 CODEN: ENDOAO

COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 003 Endocrinology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

AB TRH has been reported to possess several neurophysiological actions in the brain. To gain insights into the molecular mechanisms underlying these effects, particularly in the cerebellum, we attempted to clone a cDNA that was regulated by TRH using TRH knockout mice and subtractive cDNA analysis. Over 100 clones obtained by subtractive hybridization analysis between the wild-type and TRH(-/-) cerebellum were analyzed. Four clones among them were identical and cdc2-related **kinase** (**PFTAIRE** protein kinase 1 (PFTK1)) cDNA, which was previously reported to be expressed only in the brain and testis. PFTK1 mRNA levels in the euthyroid TRH(-/-) cerebellum supplemented with thyroid hormone were significantly decreased compared with those in the wild-type. Induction of PFTK1 mRNA by TRH was also observed in a time- and dose-dependent manner in **human** medulloblastoma-derived HTB-185 cells that expressed TRH receptor subtype 1 mRNA. In addition, treatment of 8-Br-cGMP significantly increased PFTK1 mRNA levels, and a specific inhibitor of cGMP production, ODQ, completely blocked TRH-induced expression of PFTK1 mRNA. Furthermore, induction of PFTK1 mRNA by TRH was significantly inhibited by a NOS specific inhibitor, L-NAME, but not by a MEK inhibitor, PD98059 or a calcium channel inhibitor, nimodipine. These findings demonstrated, for the first time, a novel pathway between a neuropeptide and a cell cycle related peptide in the brain, and PFTK1 may be a key regulator for TRH action in the cerebellum through the NO-cGMP

pathway.

L2 ANSWER 3 OF 8 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
ACCESSION NUMBER: 2002:385484 BIOSIS
DOCUMENT NUMBER: PREV200200385484
TITLE: A novel TRH-PFTAIRE protein kinase 1 pathway in the cerebellum: Subtractive hybridization analysis of TRH-deficient mice.
AUTHOR(S): Hashida, Tetsu; Yamada, Masanobu [Reprint author]; Hashimoto, Koshi; Shibusawa, Nobuyuki; Monden, Tsuyoushi; Satoh, Teturou; Mori, Masatomo
CORPORATE SOURCE: First Department of Internal Medicine, Gunma University School of Medicine, 3-39 Showamachi, Maebashi, Gunma, 371-8511, Japan
myamada@med.gunma-u.ac.jp
SOURCE: Endocrinology, (July, 2002) Vol. 143, No. 7, pp. 2808-2811. print.
CODEN: ENDOAO. ISSN: 0013-7227.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 17 Jul 2002
Last Updated on STN: 29 Aug 2002

AB TRH has been reported to possess several neurophysiological actions in the brain. To gain insights into the molecular mechanisms underlying these effects, particularly in the cerebellum, we attempted to clone a cDNA that was regulated by TRH using TRH knockout mice and subtractive cDNA analysis. Over 100 clones obtained by subtractive hybridization analysis between the wild-type and TRH-/- cerebellum were analyzed. Four clones among them were identical and cdc2-related **kinase** (**PFTAIRE** protein kinase 1 (PFTK1)) cDNA, which was previously reported to be expressed only in the brain and testis. PFTK1 mRNA levels in the euthyroid TRH-/- cerebellum supplemented with thyroid hormone were significantly decreased compared with those in the wild-type. Induction of PFTK1 mRNA by TRH was also observed in a time- and dose-dependent manner in **human** medulloblastoma-derived HTB-185 cells that expressed TRH receptor subtype 1 mRNA. In addition, treatment of 8-Br-cGMP significantly increased PFTK1 mRNA levels, and a specific inhibitor of cGMP production, ODQ, completely blocked TRH-induced expression of PFTK1 mRNA. Furthermore, induction of PFTK1 mRNA by TRH was significantly inhibited by a NOS specific inhibitor, L-NAME, but not by a MEK inhibitor, PD98059 or a calcium channel inhibitor, nimodipine. These findings demonstrated, for the first time, a novel pathway between a neuropeptide and a cell cycle related peptide in the brain, and PFTK1 may be a key regulator for TRH action in the cerebellum through the NO-cGMP pathway.

L2 ANSWER 4 OF 8 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
ACCESSION NUMBER: 1997:533464 BIOSIS
DOCUMENT NUMBER: PREV199799832667
TITLE: Increased levels of a novel cdc-2-related protein **kinase** (**PFTAIRE**) in a transgenic mouse overexpressing **human** NF-H.
AUTHOR(S): Jacomy, H.; Meier, J.; Lazzaro, M.; Doucet, G.; Julien, J. P.
CORPORATE SOURCE: Cent. Res. Neurosci., McGill Univ., General Hosp., Montreal H3G 1A4, Canada
SOURCE: Society for Neuroscience Abstracts, (1997) Vol. 23, No. 1-2, pp. 2174.
Meeting Info.: 27th Annual Meeting of the Society for Neuroscience. New Orleans, Louisiana, USA. October 25-30, 1997.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)

Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 12 Dec 1997
Last Updated on STN: 27 Jan 1998

L2 ANSWER 5 OF 8 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation. on STN
ACCESSION NUMBER: 2002:547606 SCISEARCH
THE GENUINE ARTICLE: 568PE
TITLE: A Novel TRH-PFTAIRE protein kinase 1 pathway in the cerebellum: Subtractive hybridization analysis of TRH-deficient mice.
AUTHOR: Hashida T; Yamada M (Reprint); Hashimoto K; Shibusawa N; Monden T; Satoh T; Mori M
CORPORATE SOURCE: Gunma Univ, Sch Med, Dept Internal Med 1, 3-39 Showa Machi, Maebashi, Gumma 3718511, Japan (Reprint); Gunma Univ, Sch Med, Dept Internal Med 1, Maebashi, Gumma 3718511, Japan
COUNTRY OF AUTHOR: Japan
SOURCE: ENDOCRINOLOGY, (JUL 2002) Vol. 143, No. 7, pp. 2808-2811. Publisher: ENDOCRINE SOC, 4350 EAST WEST HIGHWAY SUITE 500, BETHESDA, MD 20814-4110 USA. ISSN: 0013-7227.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 20
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB TRH has been reported to possess several neurophysiological actions in the brain. To gain insights into the molecular mechanisms underlying these effects, particularly in the cerebellum, we attempted to clone a cDNA that was regulated by TRH using TRH knockout mice and subtractive cDNA analysis. Over 100 clones obtained by subtractive hybridization analysis between the wild-type and TRH-/- cerebellum were analyzed. Four clones among them were identical and cdc2-related **kinase** (**PFTAIRE** protein kinase 1 (PFTK1)) cDNA, which was previously reported to be expressed only in the brain and testis. PFTK1 mRNA levels in the euthyroid TRH-/- cerebellum supplemented with thyroid hormone were significantly decreased compared with those in the wild-type. Induction of PFTK1 mRNA by TRH was also observed in a time- and dose-dependent manner in **human** medulloblastoma-derived HTB-185 cells that expressed TRH receptor subtype I mRNA. In addition, treatment of 8-Br-cGMP significantly increased PFTK1 mRNA levels, and a specific inhibitor of cGMP production, ODQ, completely blocked TRH-induced expression of PFTK1 mRNA. Furthermore, induction of PFTK1 mRNA by TRH was significantly inhibited by a NOS specific inhibitor, L-NAME, but not by a MEK inhibitor, PD98059 or a calcium channel inhibitor, nimodipine. These findings demonstrated, for the first time, a novel pathway between a neuropeptide and a cell cycle related peptide in the brain, and PFTK1 may be a key regulator for TRH action in the cerebellum through the NO-cGMP pathway.

L2 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:594985 HCAPLUS
DOCUMENT NUMBER: 137:151128
TITLE: Protein, gene and cDNA sequences of a novel **human** protein kinase related to **Pftaire kinase** subfamily and their uses in drug screening
INVENTOR(S): Yan, Chunhua; Ketchum, Karen; Di Francesco, Valentina; Beasley, Ellen M.
PATENT ASSIGNEE(S): PE Corporation (NY), USA
SOURCE: PCT Int. Appl., 131 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002061060	A2	20020808	WO 2002-US1106	20020117
WO 2002061060	A3	20021212		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002119544	A1	20020829	US 2001-801861	20010309
US 6492154	B2	20021210		
CA 2436088	AA	20020808	CA 2002-2436088	20020117
EP 1368461	A2	20031210	EP 2002-704134	20020117
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003022229	A1	20030130	US 2002-224562	20020821
US 6730506	B2	20040504		
US 2004146924	A1	20040729	US 2004-786065	20040226

PRIORITY APPLN. INFO.:			
US 2001-265151P	P	20010131
US 2001-801861	A	20010309
WO 2002-US1106	W	20020117
US 2002-224562	A3	20020821

AB The invention provides protein, cDNA and genomic sequences for a novel **human** protein kinase related to **Pftaire kinase** subfamily. The protein kinase gene is expressed in **human** uterus endometrium adenocarcinoma, testis, lung fibroblasts, kidney renal cell adenocarcinoma, and brain. The protein kinase gene has been mapped to chromosome 2. The invention also relates to screening modulator of said protein kinase and use them in therapy. The invention further relates to methods, vector and hosts for expression of said protein kinase.

L2 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:508563 HCAPLUS
DOCUMENT NUMBER: 137:195832
TITLE: A novel TRH-PFTAIRE protein kinase 1 pathway in the cerebellum: Subtractive hybridization analysis of TRH-deficient mice
AUTHOR(S): Hashida, Tetsu; Yamada, Masanobu; Hashimoto, Koshi; Shibusawa, Nobuyuki; Monden, Tsuyoushi; Satoh, Teturou; Mori, Masatomo
CORPORATE SOURCE: First Department of Internal Medicine, Gunma University School of Medicine, Gunma, 371-8511, Japan
SOURCE: Endocrinology (2002), 143(7), 2808-2811
CODEN: ENDOAO; ISSN: 0013-7227
PUBLISHER: Endocrine Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB TRH has been reported to possess several neurophysiol. actions in the brain. To gain insights into the mol. mechanisms underlying these effects, particularly in the cerebellum, we attempted to clone a cDNA that was regulated by TRH using TRH knockout mice and subtractive cDNA anal. Over 100 clones obtained by subtractive hybridization anal. between the wild-type and TRH-/- cerebellum were analyzed. Four clones among them were identical and cdc2-related **kinase** (**PFTAIRE** protein kinase 1 (PFTK1)) cDNA, which was previously reported to be expressed only in the brain and testis. PFTK1 mRNA levels in the euthyroid TRH-/- cerebellum supplemented with thyroid hormone were

significantly decreased compared with those in the wild-type. Induction of PFTK1 mRNA by TRH was also observed in a time- and dose-dependent manner in **human** medulloblastoma-derived HTB-185 cells that expressed TRH receptor subtype 1 mRNA. In addition, treatment of 8-Br-cGMP significantly increased PFTK1 mRNA levels, and a specific inhibitor of cGMP production, ODQ, completely blocked TRH-induced expression of PFTK1 mRNA. Furthermore, induction of PFTK1 mRNA by TRH was significantly inhibited by a NOS specific inhibitor, L-NAME, but not by a MEK inhibitor, PD 98059 or a calcium channel inhibitor, nimodipine. These findings demonstrated, for the first time, a novel pathway between a neuropeptide and a cell cycle related peptide in the brain, and PFTK1 may be a key regulator for TRH action in the cerebellum through the NO-cGMP pathway.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:464069 HCAPLUS
DOCUMENT NUMBER: 131:99268
TITLE: Cloning and cDNA sequence encoding **human** cyclin-dependent kinase hPFTAIRE
INVENTOR(S): Reinhard, Christoph; Pot, David; Kassam, Altaf; Marenbach, Tasha; Williams, Lewis T.
PATENT ASSIGNEE(S): Chiron Corporation, USA
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9933962	A1	19990708	WO 1998-US27666	19981228
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6432668	B1	20020813	US 1998-206344	19981207
AU 9920169	A1	19990719	AU 1999-20169	19981228
EP 1042455	A1	20001011	EP 1998-964960	19981228
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 2003166217	A1	20030904	US 2002-153242	20020522

PRIORITY APPLN. INFO.:
US 1997-68960P P 19971230
US 1998-206344 A3 19981207
WO 1998-US27666 W 19981228

AB A **human** gene encoding a novel cyclin-dependent kinase termed hPFTAIRE and its expression products can be used to provide reagents and methods for detecting migrating or metastasizing cells. The hPFTAIRE is located on chromosome 7q21-22 and is highly expressed in migrating cells, such as metastatic tumor cells and the cells which migrate during gastrulation and nervous system formation. The hPFTAIRE gene is also highly expressed in neural tissue, particularly in the hippocampus, retina, olfactory sensory cells, spinal motoneurons, and dorsal root ganglia. HPFTAIRE expression is required for a cell to undergo a transition from the G2 to M phase of the cell cycle; thus, hPFTAIRE protein is involved in regulating mitosis. In addition, hPFTAIRE may associate with different cyclins which have different functions. For example, hPFTAIRE is expressed in the testis, a location of high meiotic activity, and may be involved in increasing meiotic activity in that organ. Compns. and methods for treating proliferative disorders and neoplasia are also provided.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> s serine or threonine
L3      422038 SERINE OR THREONINE

=> d his

     (FILE 'HOME' ENTERED AT 16:42:22 ON 11 JAN 2005)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 16:43:17 ON 11 JAN 2005
L1           19 S PFTAIRE (A)KINASE?
L2            8 S HUMAN AND L1
L3       422038 S SERINE OR THREONINE

=> s l3 (a)kinase?
L4        44212 L3 (A) KINASE?

=> s "PFTAIRE"
L5           51 "PFTAIRE"

=> s l4 and l5
L6            8 L4 AND L5

=> dup rem l5
PROCESSING COMPLETED FOR L5
L7           20 DUP REM L5 (31 DUPLICATES REMOVED)

=> d 1-20 ibib ab

L7   ANSWER 1 OF 20  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:         2004:713941  HCAPLUS
DOCUMENT NUMBER:          141:420586
TITLE:                    Microarray evaluation of EP4 receptor-mediated
                          prostaglandin E2 suppression of 3T3-L1 adipocyte
                          differentiation
AUTHOR(S):                Sugimoto, Yukihiko; Tsuboi, Hiroaki; Okuno, Yasushi;
                          Tamba, Shigero; Tsuchiya, Soken; Tsujimoto, Gozo;
                          Ichikawa, Atsushi
CORPORATE SOURCE:         Department of Physiological Chemistry, Kyoto
                          University Graduate School of Pharmaceutical Sciences,
                          Sakyo-ku, Kyoto, 606-8501, Japan
SOURCE:                   Biochemical and Biophysical Research Communications
                          (2004), 322(3), 911-917
                          CODEN: BBRCA9; ISSN: 0006-291X
PUBLISHER:                Elsevier
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB   Prostaglandin E2 (PGE2) has been shown to neg. regulate adipogenesis.  To
     explore to what extent PGE2 inhibits the differentiation of cells to
     adipocytes and to examine whether its effect could be due to EP4 receptor
     signaling, we used microarrays to analyze the gene expression profiles of
     3T3-L1 cells exposed to a differentiation cocktail supplemented with PGE2,
     AE1-329 (an EP4 agonist), or vehicle.  The differentiation-associated
     responses in genes such as adipocytokines and enzymes related to lipid
     metabolism were largely weakened upon PGE2 treatment.  In particular, the
     expression of peroxisome proliferator activated receptor-γ and
     CCAAT/enhancer binding protein-α, genes playing a central role in
     adipogenesis, was greatly suppressed.  PGE2 appears to be ineffective to a
     subclass of insulin target genes such as hexokinase 2 and
     phosphofructokinase.  Similar responses were produced in the
     differentiation-associated genes upon AE1-329 treatment.  These results
     suggest that PGE2 inhibits a crucial step of the adipocyte differentiation
     process by acting on the EP4 receptor in 3T3-L1 cells.
REFERENCE COUNT:          27    THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS
```

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:796887 HCAPLUS
DOCUMENT NUMBER: 139:303801
TITLE: Sequences, diagnostic, therapeutic and drug screening use of human cancer-associated protein kinases
INVENTOR(S): Delaney, Allen D.
PATENT ASSIGNEE(S): Kinetek Pharmaceuticals, Inc., Can.
SOURCE: PCT Int. Appl., 91 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003083096	A2	20031009	WO 2003-CA409	20030321
WO 2003083096	A3	20031127		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1492871	A2	20050105	EP 2003-745233	20030321
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

PRIORITY APPLN. INFO.: US 2002-368853P P 20020328
WO 2003-CA409 W 20030321

AB Detection of expression of the provided protein kinase in cancers is useful as a diagnostic, for determining the effectiveness of drugs, and determining patient prognosis. The encoded polypeptides further provide a target for screening pharmaceutical agents effective in inhibiting the growth or metastasis of tumor cells. The present invention further provides methods and compns. relating to agents that specifically bind to HSM801163, PCTK3, PFTK1, CRK7, PRKCN, CIT, STK6, PDK1, PAK4, ITK, BMX, PRKCM, NEK6 or PDPK1 for treatment and visualization of tumors in patients. The cDNA sequences and the encoding amino acid sequences of human protein kinases HSM801163, PCTK3, PFTK1, CRK7, PRKCN, CIT, STK6, PDK1, PAK4, ITK, BMX, PRKCM, NEK6 and PDPK1 are disclosed.

L7 ANSWER 3 OF 20 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2003257559 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12782278
TITLE: L63, the Drosophila **PFTAIRE**, interacts with two novel proteins unrelated to cyclins.
AUTHOR: Rascle Anne; Stowers R Steven; Garza Dan; Lepesant Jean-Antoine; Hogness David S
CORPORATE SOURCE: Departments of Biochemistry and Developmental Biology, Stanford University School of Medicine, Stanford, CA 94305, USA.. anne.rascle@dnax.org
SOURCE: Mechanisms of development, (2003 May) 120 (5) 617-28. Journal code: 9101218. ISSN: 0925-4773.
PUB. COUNTRY: Ireland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals

ENTRY MONTH: 200403
ENTRY DATE: Entered STN: 20030604
Last Updated on STN: 20040310
Entered Medline: 20040309

AB L63 encodes a CDK-like protein homologous to the mammalian **PFTAIRE**. We showed previously that L63 provides a CDK-related function critical to development (Dev. Biol. 221 (2000) 23). We present here the first biochemical characterization of L63 kinase. In addition, we describe two novel Drosophila proteins, PIF-1 and PIF-2 (for **PFTAIRE** Interacting Factor-1 and -2), identified in a two-hybrid screen for their ability to interact with the amino-terminal region of L63. The full-length PIF-1 cDNA shows an unusual dicistronic organization. PIF-1A and PIF-1B (the L63 interactor) predicted proteins are expressed in vivo, and show a distinct expression profile during development. Interaction between L63 and PIF-1B was confirmed in vitro and in vivo. The role of this interaction remains to be demonstrated, but our data suggest that PIF-1B might serve as a regulator of L63.

L7 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:977341 HCAPLUS
DOCUMENT NUMBER: 140:229566
TITLE: A novel TRH-PFTK1 pathway
AUTHOR(S): Hashida, Tetsu; Yamada, Masanobu; Mori, Masatomo
CORPORATE SOURCE: First Department of Internal Medicine, Gunma University Faculty of Medicine, Maebashi, 371-8511, Japan
SOURCE: Naibunpi, Tonyobyoka (2003), 17(2), 144-149
CODEN: NATOFF; ISSN: 1341-3724
PUBLISHER: Kagaku Hyoronsha
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

AB A review, on the development and use of TRH knockout mouse in the discovery and function of a novel TRH-PFTK1 neurotransmission pathway.

L7 ANSWER 5 OF 20 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
ACCESSION NUMBER: 2002:501896 BIOSIS
DOCUMENT NUMBER: PREV200200501896
TITLE: Polynucleotides encoding human cyclin-dependent kinase (hPFTAIRE).
AUTHOR(S): Reinhard, Christoph [Inventor, Reprint author]; Pot, David [Inventor]; Kassam, Altaf [Inventor]; Marenbach, Tasha [Inventor]; Williams, Lewis T. [Inventor]
CORPORATE SOURCE: Alameda, CA, USA
ASSIGNEE: Chiron Corporation
PATENT INFORMATION: US 6432668 August 13, 2002
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Aug. 13, 2002) Vol. 1261, No. 2. http://www.uspto.gov/web/menu/patdata.html. e-file.
CODEN: OGUPE7. ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
ENTRY DATE: Entered STN: 25 Sep 2002
Last Updated on STN: 25 Sep 2002

AB A human gene encoding a novel cyclin-dependent kinase termed hPFTAIRE and its expression products can be used to provide reagents and methods for detecting migrating or metastasizing cells. Compositions and methods for treating proliferative disorders and neoplasia are also provided.

L7 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:594985 HCAPLUS
DOCUMENT NUMBER: 137:151128
TITLE: Protein, gene and cDNA sequences of a novel human protein kinase related to **Pftaire** kinase

subfamily and their uses in drug screening
INVENTOR(S): Yan, Chunhua; Ketchum, Karen; Di Francesco, Valentina; Beasley, Ellen M.
PATENT ASSIGNEE(S): PE Corporation (NY), USA
SOURCE: PCT Int. Appl., 131 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002061060	A2	20020808	WO 2002-US1106	20020117
WO 2002061060	A3	20021212		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002119544	A1	20020829	US 2001-801861	20010309
US 6492154	B2	20021210		
CA 2436088	AA	20020808	CA 2002-2436088	20020117
EP 1368461	A2	20031210	EP 2002-704134	20020117
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003022229	A1	20030130	US 2002-224562	20020821
US 6730506	B2	20040504		
US 2004146924	A1	20040729	US 2004-786065	20040226

PRIORITY APPLN. INFO.:

US 2001-265151P	P	20010131
US 2001-801861	A	20010309
WO 2002-US1106	W	20020117
US 2002-224562	A3	20020821

AB The invention provides protein, cDNA and genomic sequences for a novel human protein kinase related to **Pftaire** kinase subfamily. The protein kinase gene is expressed in human uterus endometrium adenocarcinoma, testis, lung fibroblasts, kidney renal cell adenocarcinoma, and brain. The protein kinase gene has been mapped to chromosome 2. The invention also relates to screening modulator of said protein kinase and use them in therapy. The invention further relates to methods, vector and hosts for expression of said protein kinase.

L7 ANSWER 7 OF 20 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2002329446 MEDLINE
DOCUMENT NUMBER: PubMed ID: 12072416
TITLE: A novel TRH-**PFTAIRE** protein kinase 1 pathway in the cerebellum: subtractive hybridization analysis of TRH-deficient mice.
AUTHOR: Hashida Tetsu; Yamada Masanobu; Hashimoto Koshi; Shibusawa Nobuyuki; Monden Tsuyoushi; Satoh Teturou; Mori Masatomo
CORPORATE SOURCE: First Department of Internal Medicine, Gunma University School of Medicine, Maebashi, Japan.
SOURCE: Endocrinology, (2002 Jul) 143 (7) 2808-11.
Journal code: 0375040. ISSN: 0013-7227.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200207
ENTRY DATE: Entered STN: 20020620

Last Updated on STN: 20020726
Entered Medline: 20020725

AB TRH has been reported to possess several neurophysiological actions in the brain. To gain insights into the molecular mechanisms underlying these effects, particularly in the cerebellum, we attempted to clone a cDNA that was regulated by TRH using TRH knockout mice and subtractive cDNA analysis. Over 100 clones obtained by subtractive hybridization analysis between the wild-type and TRH-1-cerebellum were analyzed. Four clones among them were identical and cdc2-related kinase (**PFTAIRE** protein kinase 1 (PFTK1)) cDNA, which was previously reported to be expressed only in the brain and testis. PFTK1 mRNA levels in the euthyroid TRH-1- cerebellum supplemented with thyroid hormone were significantly decreased compared with those in the wild-type. Induction of PFTK1 mRNA by TRH was also observed in a time- and dose-dependent manner in human medulloblastoma-derived HTB-185 cells that expressed TRH receptor subtype I mRNA. In addition, treatment of 8-Br-cGMP significantly increased PFTK1 mRNA levels, and a specific inhibitor of cGMP production, ODQ, completely blocked TRH-induced expression of PFTK1 mRNA. Furthermore, induction of PFrK1 mRNA by TRH was significantly inhibited by a NOS specific inhibitor, L-NAME, but not by a MEK inhibitor, PD98059 or a calcium channel inhibitor, nimodipine. These findings demonstrated, for the first time, a novel pathway between a neuropeptide and a cell cycle related peptide in the brain, and PFTK1 may be a key regulator for TRH action in t he cerebellum through t he NO-cGMP pathway.

L7 ANSWER 8 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:996556 HCAPLUS
DOCUMENT NUMBER: 140:299045
TITLE: KIAA0202, a human septin family member, interacting with hPFTAIRE1
AUTHOR(S): Yang, Tao; Gao, Yankun; Chen, Jiangye
CORPORATE SOURCE: State Key Laboratory of Molecular Biology, Institute of Biochemistry and Cell Biology, Shanghai Institutes for Biological Sciences, the Chinese Academy of Sciences, Shanghai, 200031, Peop. Rep. China
SOURCE: Shengwu Huaxue Yu Shengwu Wuli Xuebao (2002), 34(4), 520-525
CODEN: SHWPAU; ISSN: 0582-9879
PUBLISHER: Shanghai Kexue Jishu Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB The substrates and regulatory protein for hPFTAIRE1, a member of Cdc2-related kinase family localized in cytoplasm, was studied. The hPFTAJRE1 was fused to LexA and used as bait to screen a human brain LexA two-hybrid library. In this screening, 7 hPFTAIRE1 interacting proteins, including KIAA0202, were obtained. The interaction between the KIAA0202 and the hPFTAIRE1 was confirmed by immunopptn. The KIAA0202 was a 508 aa protein and was a member of septin family. The central portion of the KIAA0202 was a GTP-CDC domain, which is conserved among almost all septins. Its C-terminus was a coiled-coil structure and its N-terminus was a variable region. The results suggest that the KIAA0202 may play important roles in functional regulation of hPFFAIRE1.

L7 ANSWER 9 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:809400 HCAPLUS
DOCUMENT NUMBER: 138:301924
TITLE: Topographic regulation of kinase activity in Alzheimer's disease brains
AUTHOR(S): Grant, Philip; Pant, Harish C.
CORPORATE SOURCE: National Institute of Neurological Disorders and Stroke, Laboratory of Neurochemistry, National Institutes of Health, Bethesda, MD, 20892, USA
SOURCE: Journal of Alzheimer's Disease (2002), 4(4), 269-281
CODEN: JADIF9; ISSN: 1387-2877

PUBLISHER: IOS Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB At autopsy, a most distinctive pathol. seen in Alzheimer's disease (AD) brains is numerous abnormal neurons filled with neurofibrillary tangles (NFTs) containing stable complexes of hyperphosphorylated tau (PHF), neurofilaments and various kinases, among other proteins. Though these neuronal aggregates were actively studied, their nature and origin are still poorly understood. Our studies of regulation of phosphorylation in neurons of the squid giant fiber system, using PI3suc1 affinity chromatog., suggest that neuronal phosphorylation of cytoskeletal proteins is compartmentalized into active axonal and inactive cell body-specific multimeric complexes of kinases, substrates and phosphatases. To determine whether such compartment-specific phosphorylation complexes are present in human brains, the authors separated gray matter (enriched in cell bodies) and white matter (enriched in axons) from normal and AD brains and studied the total kinase activities in lysates, pellets and PI3suc1 complexes. In addition, Western blot anal. was used to characterize the proteins associated with PI3suc1 multimeric complexes extracted from gray and white matter. We tested the hypothesis that P13 phosphorylation complexes were abnormally compartmentalized in AD neurons with the more active complexes shifted to cell bodies (gray matter) instead of axons (white matter). We found that (1) endogenous and exogenous substrate-dependent kinase activities of AD and control brain exts. were similar in both gray and white matter. (2) Long post mortem times tend to erase any differences in kinase activity between control and AD exts. In contrast to shorter post mortem times (4.5--10 h), long post mortem times (13--34 h) significantly minimize the variances in kinase activities between control and AD brain exts. suggesting that cell death and proteolysis may eliminate any intrinsic differences in enzyme activities. (3) Except for the significantly higher level of histone phosphorylation in control white exts., the kinase activities of PI3suc1-derived multimeric complexes from gray and white matter were also similar in control and AD brains. Here, too, variances between control and AD distributions were significantly different ($p < 0.001$--0.02) suggesting that the P13 complexes were different. We also found differences in the Western blot profiles of PI3suc1-associated kinases and cytoskeletal proteins; higher expression of phosphorylated NF-H and PHF-tau in gray matter of AD brains was detected. We believe that such differences in P13 complexes from human control and AD brain samples displaying extensive heterogeneity in age, post mortem time and clin. history, may be important.
REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:272250 HCAPLUS
DOCUMENT NUMBER: 136:49086
TITLE: Identification and cellular localization of human PFTAIRE1
AUTHOR(S): Yang, T.; Chen, J.-y.
CORPORATE SOURCE: State Key Laboratory of Molecular Biology, Institute of Biochemistry and Cell Biology, Shanghai Institutes for Biological Sciences, 320 Yue-yang Road, Chinese Academy of Sciences, Shanghai, 200031, Peop. Rep. China
SOURCE: Gene (2001), 267(2), 165-172
CODEN: GENED6; ISSN: 0378-1119
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We isolated a novel member of putative Cdc2-related serine/threonine protein kinases from a Hela cell cDNA library. The cDNA encodes a protein of 469 amino acids, sharing 95% identities with the mouse PFTAIRE1 throughout the entire protein sequence. This gene was designated human

PFTAIRE1. The gene was located at human chromosome 7q21.13 with radiation hybrid polymerase chain reaction (RH-PCR) anal. By Northern blotting anal., a 6 kb transcript is detected with varied levels of expression of the hPFTAIRE1 in 16 human tissues. The hPFTAIRE1 was highly expressed in brain, pancreas, kidney, heart, testis and ovary. The transcript was also detected at lower level in other tissues, except in spleen and thymus where the transcript was hardly detected. The protein was fused to the C-terminus of a green fluorescent protein (GFP) and ectopically expressed in Hela cells. The florescence microscope results indicated that the hPFTAIRE1 exhibits cytoplasmic distribution.

REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 11 OF 20 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN

ACCESSION NUMBER: 2001:311998 BIOSIS
DOCUMENT NUMBER: PREV200100311998
TITLE: Characterizing the transcriptional phenotype of myeloma cells.
AUTHOR(S): Claudio, Jaime O. [Reprint author]; Tang, HongChang [Reprint author]; Khan, Esther Masih [Reprint author]; Voralia, Michael [Reprint author]; Li, Zhi Hua [Reprint author]; Cukerman, Eva [Reprint author]; Francisco-Pabalan, Ofelia [Reprint author]; Liew, Choong-Chin [Reprint author]; Stewart, A. Keith [Reprint author]
CORPORATE SOURCE: Oncology, University Health Network, Toronto, ON, Canada
SOURCE: Blood, (November 16, 2000) Vol. 96, No. 11 Part 1, pp. 578a. print.
Meeting Info.: 42nd Annual Meeting of the American Society of Hematology. San Francisco, California, USA. December 01-05, 2000. American Society of Hematology.
CODEN: BLOOAW. ISSN: 0006-4971.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 27 Jun 2001
Last Updated on STN: 19 Feb 2002

AB Although the initiating molecular event in multiple myeloma has been defined by identification of several nonrandom chromosomal translocations, the transcriptional phenotype of myeloma cells subsequent to transformation has not been fully characterized. We have therefore analyzed the global gene expression of CD138+ myeloma cells from pooled patient samples. Using cDNA library construction which avoids PCR, and focuses on 5' sequence together with bioinformatic tools we have generated over 6,500 cDNA sequences. More than 13% of these genes lack a sequence match in existing databases suggesting that these represent potentially novel genes. An additional 9.5% of cDNAs matched only expressed sequence tags and 4.5% matched the sequence only of a clone from the high throughput genomic sequence database. The remaining genes include known nuclear genes representing more than 57% of all sequences analyzed. In total our Myeloma Gene Database consists of -3,600 non-redundant genes. We have classified these expressed genes according to putative functions, functional domains, and novel molecules. Among the novel genes identified are a SH3-SAM domain containing adaptor strongly expressed in hematopoietic tissues, a mitogen activated protein tyrosine phosphatase, Rho/Rac GEF homologous gene, a Twist related gene, a ser/thr kinase, a kinase of the **PFTAIRE** family and several zinc finger domain containing genes. Using these expressed genes, we initially constructed a prototype glass slide microarray consisting of 1,700 cDNAs. Hybridization of bone marrow samples from patients and a normal adult donor reference control on our myeloma array followed by cluster analysis revealed genes that have similar pattern of expression in all patients bone marrow samples. Those genes that clustered together include DEAD box protein p68 helicase, translationally controlled tumor protein, and a gene similar to

Drosophila CG3328 gene product. At least two of the clustered genes were also identified at very high frequency in non biased sequence analysis. The significance of this pattern of expression in myeloma is as yet unknown, however the correlation of high throughput sequencing with array expression data supports the validity of microarray generated bioinformation and has encouraged our ongoing development of a myeloma array utilizing all 3,600 non redundant myeloma cDNAs characterized to date. Such an array may provide the basis for more clearly delineating the molecular phenotype of multiple myeloma.

L7 ANSWER 12 OF 20 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2000237575 MEDLINE
DOCUMENT NUMBER: PubMed ID: 10772789
TITLE: The L63 gene is necessary for the ecdysone-induced 63E late puff and encodes CDK proteins required for Drosophila development.
AUTHOR: Stowers R S; Garza D; Rascle A; Hogness D S
CORPORATE SOURCE: Department of Biochemistry, Stanford University School of Medicine, Beckman Center, B300, Stanford, California 94305-5329, USA.
SOURCE: Developmental biology, (2000 May 1) 221 (1) 23-40. Journal code: 0372762. ISSN: 0012-1606.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200005
ENTRY DATE: Entered STN: 20000613
Last Updated on STN: 20000613
Entered Medline: 20000531

AB The pulse of ecdysone that triggers Drosophila metamorphosis activates six early genes in a primary response made visible by polytene chromosome puffs. The secondary response is detected by the induction of over 100 late puffs, only a few of which have been subject to molecular genetic analysis. We present a molecular and mutational analysis of the L63 gene responsible for the late puff at 63E. This gene contains overlapping L63A, B, and C transcription units of which the A unit encodes two isoforms and the B unit three. The C unit, which exhibits little activity, encodes one of the B isoforms. Evidence that L63B, but not L63A, transcription is ecdysone responsive derives from their developmental transcription profiles and from P-element mutagenesis showing that ecdysone induction of the 63E puff requires sequences adjacent to the 5' end of L63B but not those adjacent to the 5' end of L63A. L63-specific lethal mutations showed that L63 is required not only for metamorphosis, but also maternally and for embryonic and larval development. The L63 proteins contain a common C-terminal 294-aa sequence that is 71% identical to the CDK sequence of the murine **PFTAIRE** protein. In vivo tests of L63 proteins altered by site-directed mutagenesis showed that they exhibit CDK functions. L63 proteins are widely distributed among late larval and prepupal tissues and are unlikely to be involved in cell cycle functions.

L7 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:815997 HCAPLUS
DOCUMENT NUMBER: 134:348689
TITLE: Identification of differentially expressed genes in the visual structures of brain using high-density cDNA grids
AUTHOR(S): Prasad, Shiv S.; Kojic, Ljubomir Z.; Lee, Soo-Sen; Chaudhuri, Avi; Hetherington, Phil; Cynader, Max S.
CORPORATE SOURCE: Department of Ophthalmology, Brain Research Center, University of British Columbia, Vancouver, BC, V5Z 3N9, Can.

SOURCE: Molecular Brain Research (2000), 82(1,2), 11-24
CODEN: MBREE4; ISSN: 0169-328X
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The hybridization patterns of 18,371 high-d.-grid-arrayed non-redundant complementary DNA (cDNA) clones were examined using three different sources of cDNA probes. The first set of probes was synthesized from mRNA isolated from visual brain areas MT and V4 of Vervet monkey. The second set of probes was derived from cDNA libraries constructed from two micro dissected sets of layers of the monkey Lateral Geniculate Nucleus layers within the visual pathway, namely the magnocellular and parvocellular layers. The third set of cDNA probes was synthesized from the subtracted fractions of the cDNAs enriched for either the magnocellular or the parvocellular layers of the Lateral Geniculate Nucleus. Software, linked directly to the Genbank database, was developed to aid in the rapid identification of both expressed and differentially expressed genes. Our results indicate that both the cDNA probes synthesized from mRNA and cDNA libraries can identify similar fractions of expressed genes. However, the subtracted cDNA probes improve the efficiency of detection for those genes that are expressed at much lower abundance. Analyses of these results for the differential expression patterns of these genes were validated by semi-quant. PCR on the DNA derived from the whole tissue cDNA libraries. A list of some known genes that are statistically differentially expressed within the magnocellular layers of the LGN and area MT in the primate visual areas is derived.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 14 OF 20 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:464069 HCAPLUS
DOCUMENT NUMBER: 131:99268
TITLE: Cloning and cDNA sequence encoding human cyclin-dependent kinase hPFTAIRE
INVENTOR(S): Reinhard, Christoph; Pot, David; Kassam, Altaf; Marenbach, Tasha; Williams, Lewis T.
PATENT ASSIGNEE(S): Chiron Corporation, USA
SOURCE: PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9933962	A1	19990708	WO 1998-US27666	19981228
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6432668	B1	20020813	US 1998-206344	19981207
AU 9920169	A1	19990719	AU 1999-20169	19981228
EP 1042455	A1	20001011	EP 1998-964960	19981228
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 2003166217	A1	20030904	US 2002-153242	20020522

PRIORITY APPLN. INFO.:
US 1997-68960P P 19971230
US 1998-206344 A3 19981207
WO 1998-US27666 W 19981228

AB A human gene encoding a novel cyclin-dependent kinase termed hPFTAIRE and its expression products can be used to provide reagents and methods for detecting migrating or metastasizing cells. The hPFTAIRE is located on chromosome 7q21-22 and is highly expressed in migrating cells, such as metastatic tumor cells and the cells which migrate during gastrulation and

nervous system formation. The hPFTAIRE gene is also highly expressed in neural tissue, particularly in the hippocampus, retina, olfactory sensory cells, spinal motoneurons, and dorsal root ganglia. HPFTAIRE expression is required for a cell to undergo a transition from the G2 to M phase of the cell cycle; thus, hPFTAIRE protein is involved in regulating mitosis. In addition, hPFTAIRE may associate with different cyclins which have different functions. For example, hPFTAIRE is expressed in the testis, a location of high meiotic activity, and may be involved in increasing meiotic activity in that organ. Compns. and methods for treating proliferative disorders and neoplasia are also provided.
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 15 OF 20 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN
ACCESSION NUMBER: 1999:506877 BIOSIS
DOCUMENT NUMBER: PREV199900506877
TITLE: Physical and transcript map of CCM1 candidate interval on chromosome 7q.
AUTHOR(S): Sahoo, T. [Reprint author]; Thomas, J. W.; Lee-Lin, S.-Q.; Kuehl, P. M.; Dokken, C.; Johnson, E. W.; Green, E. D.; Marchuk, D. A. [Reprint author]
CORPORATE SOURCE: Dept Genetics, Duke Univ Medical Ctr, Durham, NC, USA
SOURCE: American Journal of Human Genetics, (Oct., 1999) Vol. 65, No. 4, pp. A418. print.
Meeting Info.: 49th Annual Meeting of the American Society of Human Genetics. San Francisco, California, USA. October 19-23, 1999. The American Society of Human Genetics.
CODEN: AJHGAG. ISSN: 0002-9297.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 3 Dec 1999
Last Updated on STN: 3 Dec 1999

L7 ANSWER 16 OF 20 MEDLINE on STN DUPLICATE 4 .
ACCESSION NUMBER: 1998208722 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9547506
TITLE: The identification and characterization of expression of **Pftaire**-1, a novel Cdk family member, suggest its function in the mouse testis and nervous system.
AUTHOR: Besset V; Rhee K; Wolgemuth D J
CORPORATE SOURCE: Department of Genetics and Development, Columbia University College of Physicians and Surgeons, New York, NY 10032, USA.
CONTRACT NUMBER: HD 07968 (NICHD)
SOURCE: Molecular reproduction and development, (1998 May) 50 (1) 18-29.
Journal code: 8903333. ISSN: 1040-452X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Space Life Sciences
OTHER SOURCE: GENBANK-AF033655
ENTRY MONTH: 199805
ENTRY DATE: Entered STN: 19980609
Last Updated on STN: 20020124
Entered Medline: 19980528
AB We have isolated a murine cDNA encoding for a novel putative Cdk-related protein kinase, which has been named **Pftaire**-1, by screening a testis cDNA library for new serine/threonine kinases. **Pftaire**-1 showed 50% and 49% amino acid identity with Cdk5 and Pctaire-3, respectively, and contains the eleven subdomains characteristic of the

protein kinases. By northern blot analysis we detected two transcripts of approximately 5.5 and 4.9 kb in size. These transcripts were expressed at low level in all murine tissues tested, except in the brain, testis and embryo, where high expression was detected. Cellular localization of the mRNAs by in situ hybridization analysis shows that **Pftaire**-1 is expressed in late pachytene spermatocytes in the testis and in post mitotic neuronal cells both in the brain and the embryo, suggesting a role of **Pftaire**-1 both in the process of meiosis as well as neuron differentiation and/or function.

L7 ANSWER 17 OF 20 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation. on STN

ACCESSION NUMBER: 1997:533464 BIOSIS
DOCUMENT NUMBER: PREV199799832667
TITLE: Increased levels of a novel cdc-2-related protein kinase (**PFTAIRE**) in a transgenic mouse overexpressing human NF-H.
AUTHOR(S): Jacomy, H.; Meier, J.; Lazzaro, M.; Doucet, G.; Julien, J. P.
CORPORATE SOURCE: Cent. Res. Neurosci., McGill Univ., General Hosp., Montreal H3G 1A4, Canada
SOURCE: Society for Neuroscience Abstracts, (1997) Vol. 23, No. 1-2, pp. 2174.
Meeting Info.: 27th Annual Meeting of the Society for Neuroscience. New Orleans, Louisiana, USA. October 25-30, 1997.
ISSN: 0190-5295.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LANGUAGE: English
ENTRY DATE: Entered STN: 12 Dec 1997
Last Updated on STN: 27 Jan 1998

L7 ANSWER 18 OF 20 MEDLINE on STN DUPLICATE 5

ACCESSION NUMBER: 97349127 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9205131
TITLE: Chromosomal mapping of the **PFTAIRE** gene, Pftk1, a cdc2-related kinase expressed predominantly in the mouse nervous system.
AUTHOR: Lazzaro M A; Julien J P
CORPORATE SOURCE: Centre for Research in Neuroscience, McGill University, Montreal General Hospital Research Institute, Quebec, Canada.
SOURCE: Genomics, (1997 Jun 15) 42 (3) 536-7.
Journal code: 8800135. ISSN: 0888-7543.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199709
ENTRY DATE: Entered STN: 19970916
Last Updated on STN: 19970916
Entered Medline: 19970902

L7 ANSWER 19 OF 20 MEDLINE on STN DUPLICATE 6

ACCESSION NUMBER: 97345837 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9202329
TITLE: A novel cdc2-related protein kinase expressed in the nervous system.
AUTHOR: Lazzaro M A; Albert P R; Julien J P
CORPORATE SOURCE: Centre for Research in Neuroscience, McGill University and Montreal General Hospital Research Institute, Quebec, Canada.

SOURCE: Journal of neurochemistry, (1997 Jul) 69 (1) 348-64.
Journal code: 2985190R. ISSN: 0022-3042.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-U62391
ENTRY MONTH: 199707
ENTRY DATE: Entered STN: 19970805
Last Updated on STN: 19970805
Entered Medline: 19970724

AB We report the cloning and characterization of a cDNA encoding a cdc2-related protein kinase, named **PFTAIRE**, that is expressed primarily in the postnatal and adult nervous system. We have demonstrated by in situ hybridization and indirect immunofluorescence that several populations of terminally differentiated neurons and some neuroglia expressed **PFTAIRE** mRNA and protein. In neurons, **PFTAIRE** protein was localized in the nucleus and cytoplasm of cell bodies. The anatomical, cellular, and ontogenic patterns of **PFTAIRE** expression in the nervous system differed from those of p34cdc2 and cdk5, which are expressed in brain and several other mitotic tissues. Proteins of approximately 58-60 kDa coprecipitated specifically with **PFTAIRE** from cytosolic protein preparations of adult mouse brain and transfected cells. These proteins appeared to be the major endogenous substrates associated with this kinase activity. The temporal and spatial expression patterns of **PFTAIRE** in the postnatal and adult nervous system suggest that **PFTAIRE** kinase activity may be associated with the postmitotic and differentiated state of cells in the nervous system and that its function may be distinct from those of p34cdc2 and cdk5.

L7 ANSWER 20 OF 20 MEDLINE on STN DUPLICATE 7
ACCESSION NUMBER: 97084555 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8930898
TITLE: Novel members of the cdc2-related kinase family in Drosophila: cdk4/6, cdk5, **PFTAIRE**, and PITSLRE kinase.
AUTHOR: Sauer K; Weigmann K; Sigrist S; Lehner C F
CORPORATE SOURCE: Friedrich-Miescher-Laboratorium, Max-Planck-Gesellschaft, Tubingen, Germany.
SOURCE: Molecular biology of the cell, (1996 Nov) 7 (11) 1759-69.
Journal code: 9201390. ISSN: 1059-1524.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-X99510; GENBANK-X99511; GENBANK-X99512; GENBANK-X99513
ENTRY MONTH: 199703
ENTRY DATE: Entered STN: 19970321
Last Updated on STN: 20020924
Entered Medline: 19970311

AB In addition to the previously identified Drosophila cdc2 and cdc2c genes, we have identified four additional cdc2-related genes with low stringency and polymerase chain reaction approaches. Sequence comparisons suggest that the four putative kinases represent the Drosophila homologues of vertebrate cdk4/6, cdk5, PCTAIRE, and PITSLRE kinases. Although the similarity between human and Drosophila homologues is extensive in the case of cdk5, PCTAIRE, and PITSLRE kinases (78%, 58%, and 65% identity in the kinase domain), only limited conservation is observed for Drosophila cdk4/6 (47% identity). However, like vertebrate cdk4 and cdk6, Drosophila cdk4/6 binds also to a D-type cyclin according to the results of two-hybrid experiments in yeast. Northern blot analysis indicated that the four Drosophila kinases are expressed throughout embryogenesis.

Expression in early embryogenesis appeared to be ubiquitous according to in situ hybridization. Abundant expression already at the start of embryogenesis and long before neuron differentiation was also observed in the case of cdk5 protein, which has been described as predominantly neuron specific in mice. Sequence conservation and expression pattern, therefore, suggest that all of these kinases perform important cellular functions.

```
=> d his

     (FILE 'HOME' ENTERED AT 16:42:22 ON 11 JAN 2005)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 16:43:17 ON 11 JAN 2005
L1            19 S PFTAIRE (A)KINASE?
L2             8 S HUMAN AND L1
L3        422038 S SERINE OR THREONINE
L4         44212 S L3 (A)KINASE?
L5            51 S "PFTAIRE"
L6             8 S L4 AND L5
L7            20 DUP REM L5 (31 DUPLICATES REMOVED)

=> s clon? or express? or recombinant
   2 FILES SEARCHED...
L8      6866200 CLON? OR EXPRESS? OR RECOMBINANT

=> s neuron? or nerv?
   7 FILES SEARCHED...
L9      4916861 NEURON? OR NERV?

=> s l4 and l8
L10       25404 L4 AND L8

=> s l9 and l10
L11        2385 L9 AND L10

=> s l5 and l11
L12           8 L5 AND L11

=> dup rem l12
PROCESSING COMPLETED FOR L12
L13           2 DUP REM L12 (6 DUPLICATES REMOVED)

=> d 1-2 ibib ab

L13  ANSWER 1 OF 2     MEDLINE on STN                    DUPLICATE 1
ACCESSION NUMBER:   1998208722     MEDLINE
DOCUMENT NUMBER:    PubMed ID: 9547506
TITLE:              The identification and characterization of
                    expression of Pftaire-1, a novel Cdk
                    family member, suggest its function in the mouse testis and
                    nervous system.
AUTHOR:             Besset V; Rhee K; Wolgemuth D J
CORPORATE SOURCE:   Department of Genetics and Development, Columbia University
                    College of Physicians and Surgeons, New York, NY 10032,
                    USA.
CONTRACT NUMBER:    HD 07968 (NICHD)
SOURCE:             Molecular reproduction and development, (1998 May) 50 (1)
                    18-29.
                    Journal code: 8903333. ISSN: 1040-452X.
PUB. COUNTRY:       United States
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
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FILE SEGMENT: Priority Journals; Space Life Sciences
OTHER SOURCE: GENBANK-AF033655
ENTRY MONTH: 199805
ENTRY DATE: Entered STN: 19980609
Last Updated on STN: 20020124
Entered Medline: 19980528

AB We have isolated a murine cDNA encoding for a novel putative Cdk-related protein kinase, which has been named **Pftaire**-1, by screening a testis cDNA library for new serine/**threonine kinases**. **Pftaire**-1 showed 50% and 49% amino acid identity with Cdk5 and Pctaire-3, respectively, and contains the eleven subdomains characteristic of the protein kinases. By northern blot analysis we detected two transcripts of approximately 5.5 and 4.9 kb in size. These transcripts were **expressed** at low level in all murine tissues tested, except in the brain, testis and embryo, where high **expression** was detected. Cellular localization of the mRNAs by in situ hybridization analysis shows that **Pftaire**-1 is **expressed** in late pachytene spermatocytes in the testis and in post mitotic **neuronal** cells both in the brain and the embryo, suggesting a role of **Pftaire**-1 both in the process of meiosis as well as **neuron** differentiation and/or function.

L13 ANSWER 2 OF 2 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 97084555 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8930898
TITLE: Novel members of the cdc2-related kinase family in Drosophila: cdk4/6, cdk5, **PFTAIRE**, and PITSLRE kinase.
AUTHOR: Sauer K; Weigmann K; Sigrist S; Lehner C F
CORPORATE SOURCE: Friedrich-Miescher-Laboratorium, Max-Planck-Gesellschaft, Tubingen, Germany.
SOURCE: Molecular biology of the cell, (1996 Nov) 7 (11) 1759-69. Journal code: 9201390. ISSN: 1059-1524.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-X99510; GENBANK-X99511; GENBANK-X99512; GENBANK-X99513
ENTRY MONTH: 199703
ENTRY DATE: Entered STN: 19970321
Last Updated on STN: 20020924
Entered Medline: 19970311

AB In addition to the previously identified Drosophila cdc2 and cdc2c genes, we have identified four additional cdc2-related genes with low stringency and polymerase chain reaction approaches. Sequence comparisons suggest that the four putative kinases represent the Drosophila homologues of vertebrate cdk4/6, cdk5, PCTAIRE, and PITSLRE kinases. Although the similarity between human and Drosophila homologues is extensive in the case of cdk5, PCTAIRE, and PITSLRE kinases (78%, 58%, and 65% identity in the kinase domain), only limited conservation is observed for Drosophila cdk4/6 (47% identity). However, like vertebrate cdk4 and cdk6, Drosophila cdk4/6 binds also to a D-type cyclin according to the results of two-hybrid experiments in yeast. Northern blot analysis indicated that the four Drosophila kinases are **expressed** throughout embryogenesis. **Expression** in early embryogenesis appeared to be ubiquitous according to in situ hybridization. Abundant **expression** already at the start of embryogenesis and long before **neuron** differentiation was also observed in the case of cdk5 protein, which has been described as predominantly **neuron** specific in mice. Sequence conservation and **expression** pattern, therefore, suggest that all of these kinases perform important cellular functions.

```
=> e yan c/au
E1            1     YAN BUYU/AU
E2            1     YAN BY ZHANQING/AU
E3         1084 --> YAN C/AU
E4            2     YAN C B/AU
E5          123     YAN C C/AU
E6            8     YAN C C S/AU
E7            3     YAN C CHAN/AU
E8           16     YAN C D/AU
E9            1     YAN C D L/AU
E10          24     YAN C F/AU
E11          50     YAN C G/AU
E12         470     YAN C H/AU

=> s e3
L14        1084 "YAN C"/AU

=> e ketchum k a/au
E1            1     KETCHUM JR R L/AU
E2           34     KETCHUM K/AU
E3          230 --> KETCHUM K A/AU
E4            1     KETCHUM K J/AU
E5           34     KETCHUM K L/AU
E6           22     KETCHUM KAREN/AU
E7          188     KETCHUM KAREN A/AU
E8            1     KETCHUM KAREN ANN/AU
E9            2     KETCHUM KATHY/AU
E10           2     KETCHUM KATHY L/AU
E11           4     KETCHUM KEVIN/AU
E12           3     KETCHUM KEVIN L/AU

=> s e3
L15        230 "KETCHUM K A"/AU

=> e difrancesco v/au
E1            1     DIFRANCESCO U/AU
E2            1     DIFRANCESCO U M/AU
E3           99 --> DIFRANCESCO V/AU
E4           17     DIFRANCESCO VALENTINA/AU
E5            1     DIFRANCESCOL/AU
E6            1     DIFRANCESO D/AU
E7            2     DIFRANCESO L/AU
E8            1     DIFRANCESO R/AU
E9            1     DIFRANCESO ROBIN/AU
E10           1     DIFRANCESSO L/AU
E11           6     DIFRANCIA C/AU
E12           4     DIFRANCIA CELENE/AU

=> s e3-e4
L16        116 ("DIFRANCESCO V"/AU OR "DIFRANCESCO VALENTINA"/AU)

=> e beasley e m/au
E1            1     BEASLEY E H/AU
E2            6     BEASLEY E L/AU
E3          318 --> BEASLEY E M/AU
E4            7     BEASLEY E O/AU
E5            1     BEASLEY E S G/AU
E6            2     BEASLEY E T/AU
E7            4     BEASLEY E W/AU
E8            2     BEASLEY E W 3RD/AU
E9            2     BEASLEY E W III/AU
E10           1     BEASLEY E W JR/AU
E11           1     BEASLEY EDWARD E/AU
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E12          1     BEASLEY EDWARD EVANS/AU

=> s e3
L17        318 "BEASLEY E M"/AU

=> d his

     (FILE 'HOME' ENTERED AT 16:42:22 ON 11 JAN 2005)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 16:43:17 ON 11 JAN 2005
L1           19 S PFTAIRE (A)KINASE?
L2            8 S HUMAN AND L1
L3       422038 S SERINE OR THREONINE
L4        44212 S L3 (A)KINASE?
L5           51 S "PFTAIRE"
L6            8 S L4 AND L5
L7           20 DUP REM L5 (31 DUPLICATES REMOVED)
L8      6866200 S CLON? OR EXPRESS? OR RECOMBINANT
L9      4916861 S NEURON? OR NERV?
L10       25404 S L4 AND L8
L11        2385 S L9 AND L10
L12           8 S L5 AND L11
L13           2 DUP REM L12 (6 DUPLICATES REMOVED)
                E YAN C/AU
L14        1084 S E3
                E KETCHUM K A/AU
L15         230 S E3
                E DIFRANCESCO V/AU
L16         116 S E3-E4
                E BEASLEY E M/AU
L17         318 S E3

=> s l14 or l15 or l16 or l17
L18       1520 L14 OR L15 OR L16 OR L17

=> s l4 and l18
L19           7 L4 AND L18

=> dup rem l19
PROCESSING COMPLETED FOR L19
L20           7 DUP REM L19 (0 DUPLICATES REMOVED)

=> d 1-7 ibib ab

L20  ANSWER 1 OF 7  EMBASE  COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED.
     on STN
ACCESSION NUMBER:   2004022076  EMBASE
TITLE:              GIT1 Functions asa as a Scaffold for MEK1-Extracellular
                    Signal-Regulated Kinase 1 and 2 Activation by Angiotensin
                    II and Epidermal Growth Factor.
AUTHOR:             Yin G.; Haendeler J.; Yan C.; Berk B.C.
CORPORATE SOURCE:   B.C. Berk, Center for Cardiovascular Research, University
                    of Rochester, 601 Elmwood Ave., Rochester, NY 14642, United
                    States. bradford_berk@urmc.rochester.edu
SOURCE:             Molecular and Cellular Biology, (2004) 24/2 (875-885).
                    Refs: 53
                    ISSN: 0270-7306  CODEN: MCEBD4
COUNTRY:            United States
DOCUMENT TYPE:      Journal; Article
FILE SEGMENT:       029     Clinical Biochemistry
LANGUAGE:           English
SUMMARY LANGUAGE:   English
AB   Activation of the mitogen-activated protein kinase pathway represented by
```

extracellular signal-regulated kinases (ERK1/2)(ERKI/2) and activation of the upstream kinase (MEK1)(MEKI) are critical events for growth factor signal transduction. c-Src has been proposed asa as a common mediator for these signals in response to both G protein-coupled receptors (GPCRs)(GPCRS) and tyrosine kinase-coupled receptors (TKRs). Here we show that the GPCR kinase-interacting protein 1 (GIT1) I (GITI) is a substrate for c-Src Sre that associates with MEK1 MEKI in vascular smooth-muscle cells and human embryonic iddney kidney 293 cells. GIT1 GITI binding via coiled-coil domains anda and a Spa2 homology domain is required for sustained activation of MEK1-ERK1/2 MEKI-ERKI/2 after stimulation with angiotensin II 11 and epidermal growth factor. We propose that GIT1 GITI serves asa as a scaffold protein to facilitate c-Src-dependent activation of MEK1 MEKI-ERK1/2 in response to both GPCRs and TKRs TKRS.

L20 ANSWER 2 OF 7 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2004-11100 BIOTECHDS
TITLE: Novel human kinase protein, related to serine/**threonine kinase** subfamily, useful as model for developing human therapeutic targets and serves as target for human therapeutics;
vector-mediated protein-kinase gene transfer and expression in host cell for recombinant protein production, drug screening and gene therapy
AUTHOR: NEELAM B; YAN X; **YAN C**
PATENT ASSIGNEE: APPLERA CORP
PATENT INFO: US 2003207311 6 Nov 2003
APPLICATION INFO: US 2003-427923 2 May 2003
PRIORITY INFO: US 2003-427923 2 May 2003; US 2002-377592 6 May 2002
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2004-166978 [16]
AB DERWENT ABSTRACT:

NOVELTY - An isolated human kinase peptide (I) that is related to serine/**threonine kinase** subfamily, consisting or comprising a fully defined sequence of 318 amino acids (S2) as given in the specification, or its fragment comprising 10 contiguous amino acids, or an amino acid sequence of an allelic variant or ortholog of the amino acid sequence of (S2), is new.

DETAILED DESCRIPTION - An isolated human kinase peptide (I) that is related to serine/**threonine kinase** subfamily, consisting or comprising: (a) a fully defined sequence of 318 amino acids (S2) as given in the specification, or its fragment comprising 10 contiguous amino acids; (b) an amino acid sequence of an allelic variant or ortholog of the amino acid sequence of (S2), where the allelic variant or ortholog is encoded by a nucleic acid molecule that hybridizes under stringent conditions to the opposite strand of a nucleic acid molecule having a fully defined sequence of 957 (S1) (a cDNA molecule) or 105413 (genomic sequence) nucleotides (S3) as given in the specification; or (c) a fragment of an amino acid sequence of (S2), comprising 10 contiguous amino acids. The isolated human kinase peptide variant has an amino acid sequence that shares 70% homology with (S2). INDEPENDENT CLAIMS are also included for the following: (1) an isolated antibody (II) that selectively binds to (I) comprising the amino acid sequence of (S2), its allelic variant or ortholog, or fragment; (2) an isolated nucleic acid molecule (III) consisting or comprising of a nucleotide sequence that encodes (I) or a nucleotide sequence that is complement of the nucleotide sequence encoding (I), where allelic variant of (III) encoding a human kinase peptide shares at least 80% homology with (S1) or (S3); (3) a gene chip comprising (III) that comprises a nucleotide sequence encoding (I), or its complement; (4) a transgenic non-human animal comprising (III) that comprises a nucleotide sequence encoding (I), or its complement; (5) a nucleic acid vector (IV) comprising (III) that comprises a nucleotide sequence encoding (I), or its complement; (6) a host cell comprising (IV); (7) preparation of (I); (8) detecting the presence of (I) in a

sample involves contacting the sample with a detection agent that specifically allows detection of the presence of the peptide in the sample; (9) detecting the presence of (III) in a sample involves contacting the sample with an oligonucleotide that hybridizes to the nucleic acid molecule under stringent conditions and determining whether an oligonucleotide binds to the nucleic acid molecule in the sample; and (10) a pharmaceutical composition (V) comprising an agent that binds to (I), and identified using (I) (comprising a sequence of (S2), its allelic variant or ortholog or fragment), and a carrier; and (11) a method for identifying a modulator of a human kinase peptide, comprising administering the agent to a host cell comprising an expression vector that expresses the peptide, optionally involves contacting a cell expressing the peptide with an agent, and determining if the agent has modulated the expression of the peptide.

WIDER DISCLOSURE - The following are disclosed: (1) chimeric or fusion proteins comprising (I); (2) agents identified using screening methods involving (I); (3) non-coding fragments of a nucleic acid molecule having a sequence of (S1) or (S3); (4) kit comprising (II) for detecting (I) comprising an amino acid sequence of (S2), its allelic variant or ortholog or fragment; (5) kits for detecting the presence of nucleic acid encoding kinase peptide in a biological sample; (6) analogs or derivatives of (I); and (7) compartmentalized kits comprising necessary reagents for carrying out the above mentioned assays.

BIOTECHNOLOGY - Preparation: (I) is prepared by standard recombinant techniques (claimed). Preferred Molecules: The allelic variants of (I) and (III) preferably share 90% homology with (S2), and (S1) or (S3), respectively.

ACTIVITY - None given.

MECHANISM OF ACTION - Gene therapy; (I) expression or activity modulator. No supporting biological data is given.

USE - (I) comprising an amino acid sequence of (S2), its allelic variant or ortholog or fragment, is useful for identifying a modulator of a human kinase peptide. (I) comprising an amino acid sequence of (S2), its allelic variant or ortholog or fragment is also useful for identifying an agent that binds to it. (V) is useful for treating a disease or condition mediated by human kinase peptide (all claimed). (I) and (III) can be used as models for the development of human therapeutic targets, aid in the identification of therapeutic proteins and serve as targets for the development of human therapeutic agents that modulate kinase activity in cells and tissue that express the kinase. (I) and (III) can be used as a query sequence to perform a search against sequence databases to, identify other family members or related sequences. (I) is used to raise antibodies or to elicit another immune response, as a reagent in assays designed to quantitatively determine levels of the protein in biological fluids, and as markers for tissues in which the corresponding protein is preferentially expressed. (II) is useful for isolating (I), purifying (I), and to assess expression of (I) in active stages of a disease, or in an individual with a predisposition towards disease related to the protein's function. The antibodies are also useful for assessing normal and aberrant subcellular localization of cells in various tissues in an organism, in pharmacogenomic analysis, for tissue typing and for inhibiting protein function. (III) is useful as probes, primers, chemical intermediates and in biological assays. The nucleic acid molecules are useful for constructing recombinant vectors, host cells and transgenic animals, and for designing ribozymes. The nucleic acids are also useful in drug screening assays and as a target for treatment by the compounds identified through drug screening. The nucleic acid molecules are also useful for monitoring effectiveness of modulating compounds on the expression or activity of kinase gene in clinical trials or in treatment regimen, and for testing an individual for a genotype that while not necessarily causing the disease nevertheless affects the treatment modality. The nucleic acid molecules are also useful in diagnostic assays for qualitative changes in expression of nucleic acid encoding kinase and particularly in

qualitative changes that lead to pathology. The nucleic acid molecules can be used to detect mutations in genes encoding kinases and gene expression products such as mRNA. Detection of mutated form of gene encoding kinase associated with a dysfunction provides a diagnostic tool for a active disease or susceptibility to disease which results from overexpression, underexpression or altered expression of kinase protein. (III) also provides vectors for gene therapy in patients with aberrant expression of gene encoding kinase.

EXAMPLE - None given.(128 pages)

L20 ANSWER 3 OF 7 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2002-12722 BIOTECHDS
TITLE: A human kinase protein that is related to the serine/**threonine kinase** subfamily, useful as models for development of human therapeutic targets and serves as targets for developing human therapeutic agents; antibody, DNA chip, transgenic animal generation, fusion protein, drug screening, DNA probe, DNA primer and ribozyme, useful for gene therapy, diagnosis, pharmacogenomics analysis, clinical trial and expression profiling
AUTHOR: WEBSTER M; LI Z; **KETCHUM K A**; DI FRANCESCO V; **BEASLEY E M**
PATENT ASSIGNEE: APPLERA CORP
PATENT INFO: WO 2002018553 7 Mar 2002
APPLICATION INFO: WO 2000-US26260 31 Aug 2000
PRIORITY INFO: US 2001-797908 5 Mar 2001
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-304251 [34]
AB DERWENT ABSTRACT:

NOVELTY - An isolated human kinase protein (I) that is related to serine/**threonine kinase** subfamily, consisting of or comprising a fully defined 328 (S2) or 135 (S5) amino acid sequence given in the specification, or its fragment comprising 10 contiguous amino acids, or an amino acid sequence of an allelic variant or ortholog of the amino acid sequence of (S2) or (S5), is new.

DETAILED DESCRIPTION - (I) consists or comprises of: an amino acid sequence of (S2) or (S5); an amino acid sequence of an allelic variant or an ortholog of (S2) or (S5), where the allelic variant or ortholog is encoded by a nucleic acid molecule that hybridizes under stringent conditions to the opposite strand of a nucleic acid molecule having a fully defined 990 (S1) or 408 nucleotide (S3) sequence given in the specification; a fragment of an amino acid sequence of (S2) or (S5), comprising 10 contiguous amino acids. The isolated human kinase variant has an amino acid sequence that shares 70% homology with (S2) or (S5). INDEPENDENT CLAIMS are also included for the following: (1) an isolated antibody (II) that selectively binds to (I) comprising the amino acid sequence of (S2) or (S5), its allelic variant or ortholog, or fragment; (2) an isolated nucleic acid molecule (III) consisting or comprising of a nucleotide sequence that encodes (I) or a nucleotide sequence that is a complement of the nucleotide sequence encoding (I), where the allelic variant of (III) encoding a human kinase peptide shares at least 80% homology with (S1) or (S3); (3) a gene chip comprising (III) that comprises a nucleotide sequence encoding (I), or its complement; (4) a transgenic non-human animal comprising (III) that comprises a nucleotide sequence encoding (I), or its complement; (5) a nucleic acid vector (IV) comprising (III) that comprises a nucleotide sequence encoding (I), or its complement; (6) a host cell comprising (IV); (7) preparation of (I); (8) detecting the presence of (I) in a sample involves contacting the sample with a detection agent that specifically allows detection of the presence of the peptide in the sample; (9) detecting the presence of (III) in a sample involves contacting the sample with an oligonucleotide that hybridizes to the nucleic acid molecule under stringent conditions

and determining whether an oligonucleotide binds to the nucleic acid molecule in the sample; and (10) a pharmaceutical composition (V) comprising an agent that binds to (I), and was identified using (I) (comprising a sequence of (S2) or (S5), its allelic variant or ortholog or fragment), and a carrier.

WIDER DISCLOSURE - Disclosed are: (a) chimeric or fusion proteins comprising (I); (b) agents identified using screening methods involving (I); (c) non-coding fragments of a nucleic acid molecule having a sequence of (S1) or (S3); (d) a kit comprising (II) for detecting (I) comprising an amino acid sequence of (S2) or (S5), its allelic variant or ortholog or fragment; (e) kits for detecting the presence of kinase nucleic acid in a biological sample; (f) analogs or derivatives of (I); and (g) compartmentalized kits comprising necessary reagents for carrying out the above mentioned assays.

BIOTECHNOLOGY - Preparation: (I) is prepared by standard recombinant techniques (claimed). Preferred Molecules: The allelic variants of (I) and (III) preferably share 90% homology with (S2) or (S5), and (S1) or (S3), respectively.

ACTIVITY - None given.

MECHANISM OF ACTION - Gene therapy; (I) expression or activity modulator. No suitable data given.

USE - (I) comprising an amino acid sequence of (S2) or (S5), its allelic variant or ortholog or fragment, is useful for identifying a modulator of a human kinase protein; preferably, the agent is administered to a host cell comprising an expression vector that expresses the peptide. The method optionally involves contacting a cell expressing the peptide with an agent and determining if the agent has modulated the expression of the peptide. (I) comprising an amino acid sequence of (S2) or (S5), its allelic variant or ortholog or fragment is also useful for identifying an agent that binds to it. (V) is useful for treating a disease or condition mediated by human kinase protein (all claimed). (I) and (III) can be used as models for the development of human therapeutic targets, aid in the identification of therapeutic proteins and serve as targets for the development of human therapeutic agents that modulate kinase activity in cells and tissue that express the kinase. (I) and (III) can be used as a query sequence to perform a search against sequence databases to, identify other family members or related sequences. (I) is used to raise antibodies or to elicit another immune response, as a reagent in assays designed to quantitatively determine levels of the protein in biological fluids, and as markers for tissues in which the corresponding protein is preferentially expressed. The kinases isolated from humans and their human/mammalian orthologs serve as targets for identifying agents for use in mammalian therapeutic applications, and biological assays related to kinases that are related to members of the serine/**threonine kinase** subfamily. The proteins can also be used in screening assays to screen a compound for its ability to stimulate or inhibit interaction between kinase protein and a molecule that normally interacts with the kinase protein. The proteins also provide a target for diagnosing a disease or predisposition to disease mediated by the peptide, and in pharmacogenomic analysis. The peptides are also useful for treating a disorder characterized by absence of, inappropriate or unwanted expression of the protein. (II) is useful for isolating (I), purifying (I), and to assess expression of (I) in active stages of a disease, or in an individual with a predisposition towards disease related to the protein's function. The antibodies are also useful for assessing normal and aberrant subcellular localization of cells in various tissues in an organism, in pharmacogenomic analysis, for tissue typing and for inhibiting protein function. (III) is useful as probes, primers, chemical intermediates and in biological assays. The nucleic acid molecules are useful for constructing recombinant vectors, host cells and transgenic animals, and for designing ribozymes. The nucleic acids are also useful in drug screening assays and as a target for treatment by the compounds identified through drug screening. The nucleic acid molecules are also useful for monitoring effectiveness of modulating

compounds on the expression or activity of the kinase gene in clinical trials or in a treatment regimen, and for testing an individual for a genotype that while not necessarily causing the disease nevertheless affects the treatment modality. The nucleic acid molecules are also useful in diagnostic assays for qualitative changes in kinase nucleic acid expression and particularly in qualitative changes that lead to pathology. The nucleic acid molecules can be used to detect mutations in kinase genes and gene expression products such as mRNA. Detection of a mutated form of the kinase gene associated with a dysfunction provides a diagnostic tool for active disease or susceptibility to disease which results from overexpression, underexpression or altered expression of the kinase protein. (III) also provides vectors for gene therapy in patients with aberrant kinase gene expression.

ADMINISTRATION - No details given.

EXAMPLE - None given. (65 pages)

L20 ANSWER 4 OF 7 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2002-19955 BIOTECHDS
TITLE: An isolated LIM domain kinase polypeptide useful as a model for developing human therapeutic targets, to aid in identification of therapeutics and to serve as targets for developing kinase activity modulators in cells; recombinant enzyme protein production for use in disease therapy and diagnosis
AUTHOR: **YAN C**; **KETCHUM K A**; DI FRANCESCO V; **BEASLEY E M**
PATENT ASSIGNEE: PE CORP NY
PATENT INFO: US 6403353 11 Jun 2002
APPLICATION INFO: US 2001-978197 22 Mar 2001
PRIORITY INFO: US 2001-978197 17 Oct 2001
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-536038 [57]
AB DERWENT ABSTRACT:

NOVELTY - An isolated LIM domain kinase (LIMK) polypeptide (I) having a fully defined sequence of 255 amino acids as given in specification, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a composition comprising (I) and a carrier.

BIOTECHNOLOGY - Preparation: (I) is prepared by standard recombinant techniques.

ACTIVITY - None given.

MECHANISM OF ACTION - None given.

USE - (I) can be used as a model for the development of human therapeutic targets, aid in the identification of therapeutic proteins and serve as targets for the development of human therapeutic agents that modulate kinase activity in cells and tissue that express the kinase. (I) can be used as a query sequence to perform a search against sequence databases to, identify other family members or related sequences. (I) is used to raise antibodies or to elicit another immune response, as a reagent in assays designed to quantitatively determine levels of the protein in biological fluids, and as markers for tissues in which the corresponding protein is preferentially expressed. The kinase proteins isolated from humans and their human/mammalian orthologs serve as targets for identifying agents for use in mammalian therapeutic applications, and biological assays related to kinase proteins that are related to members of the serine/threonine subfamily. The proteins can also be used in screening assays to screen a compound for its ability to stimulate or inhibit interaction between kinase protein and a molecule that normally interacts with the kinase protein. The proteins also provide a target for diagnosing a disease or predisposition to disease mediated by the peptide, and in pharmacogenomic analysis. The peptides are also useful for treating a disorder characterized by absence of, inappropriate or unwanted expression of the protein. The proteins are useful in drug

screening assays; end point assays to identify compounds that modulate kinase activity; in competition binding assays in methods designed to discover compounds that interact with the kinase; as a target for diagnosing active protein activity, disease or predisposition to disease in a patient with the variant peptide, particularly activities and conditions that are known for other members of the serine/**threonine kinase** subfamily proteins.

ADMINISTRATION - No details given.

EXAMPLE - No preparative example given.(82 pages)

L20 ANSWER 5 OF 7 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2002-17807 BIOTECHDS
TITLE: Nucleic acid molecules encoding calcium/calmodulin-dependent protein kinases, useful for preventing diagnosing and treating e.g. cancers, psoriasis and inflammation; recombinant protein production by vector-mediated gene transfer and expression in host cell, useful for gene therapy
AUTHOR: YE J; **YAN C**; DI FRANCESCO V; **BEASLEY E M**
PATENT ASSIGNEE: PE CORP NY
PATENT INFO: US 6387677 14 May 2002
APPLICATION INFO: US 2001-800960 8 Mar 2001
PRIORITY INFO: US 2001-800960 8 Mar 2001
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-478444 [51]
AB DERWENT ABSTRACT:

NOVELTY - An isolated nucleic acid molecule (I) encoding a calcium/calmodulin-dependent protein kinase, is new.

DETAILED DESCRIPTION - An isolated nucleic acid molecule (I) encoding a calcium/calmodulin-dependent protein kinase, comprising a nucleotide sequence selected from: (a) a nucleotide sequence that encodes a protein comprising a fully defined 565 amino acid sequence (A1) given in the specification; (b) a nucleotide sequence comprising the fully defined 2061 nucleotide sequence (N1) given in the specification ((N1) is a complementary deoxyribonucleic acid (cDNA) encoding the kinase); and/or (c) a nucleotide sequence comprising the defined 62804 nucleotide sequence (N2) given in the specification ((N2) is a genomic sequence that spans the gene encoding the kinase protein). INDEPENDENT CLAIMS are also included for: (1) a nucleic acid vector (II) comprising (I); (2) a host cell (III) containing the vector (II); (3) producing (IV) a polypeptide comprising (A1), comprising culturing the host cell (III) under conditions sufficient for the production of said polypeptide, and recovering said polypeptide from the host cell culture; and (4) an isolated nucleic acid molecule (I') comprising a nucleotide sequence that is completely complementary to (I).

BIOTECHNOLOGY - Preferred Vectors: The vector (II) is a plasmid, virus or bacteriophage. (I) is inserted into the vector in proper orientation and correct reading frame so that the protein of (A1) may be expressed by a cell transformed with the vector. The isolated nucleic acid molecule may be operatively linked to a promoter sequence. Preparation: (I) and the protein it encodes may be produced via standard recombinant and synthetic methodologies e.g. by culturing (IV) the cell (III) (claimed).

ACTIVITY - Cytostatic; Anti-inflammatory; Anti-arteriosclerotic; Anti-psoriatic. No biological data given.

MECHANISM OF ACTION - Gene therapy; Protein therapy; Vaccine; Enzymatic (calcium/calmodulin-dependent protein kinase). The gene (I) and encoded protein are related to the family of calcium/calmodulin-dependent protein kinases, which are serine/**threonine kinases**.
The protein shows a particularly high degree of similarity to calcium/calmodulin-dependent protein kinase II (CaM II). CaM II is comprised of alpha, beta, gamma, and delta subunits. Each subunit is encoded by a separate gene and alternatively splice forms of each subunit

have been found (Breen et al., Biochem. Biophys. Res. Commun. 236 (2), 473-478 (1997)). CaM II exerts important effects on hormones and neurotransmitters that utilize calcium as a second messenger. Beta-cell CaM II activity is associated with insulin secretion, and multiple isoforms of CaM II are expressed in human islets of Langerhans (Breen et al., Biochem. Biophys. Res. Commun. 236 (2), 473-478 (1997)). It has been suggested that CaM II controls activation-induced cellular differentiation, and is important for imparting antigen-dependent memory to T cells (Bui et al., Cell 100: 457-467, 2000).

USE - These polynucleotide sequences (I) and the peptides they encode can be used as models for the development of human therapeutic targets, aid in the identification of therapeutic proteins, and serve as targets for the development of human therapeutic agents that modulate kinase activity in cells and tissues that express the kinase. The calcium/calmodulin-dependent protein kinase encoded by (I) is expressed in humans in the placenta, breast cancers (including mammary adenocarcinoma), skin melanotic melanomas, ovary adenocarcinomas, uterus leiomyosarcomas, Burkitt's lymphomas (lymph), duodenal adenocarcinomas (small intestine), and fetal brain tumors and in disease conditions including inflammation, arteriosclerosis, and psoriasis (claimed).

ADMINISTRATION - Standard methodologies.

ADVANTAGE - Kinase proteins, particularly members of the calcium/calmodulin-dependent protein kinase subfamily, are a major target for drug action and development. Accordingly, it is valuable to the field of pharmaceutical development to identify and characterize previously unknown members of this subfamily of kinase proteins. (I) Encodes a previously unidentified human kinase protein that has homology to members of the calcium/calmodulin-dependent protein kinase subfamily.

EXAMPLE - No suitable example given.(85 pages)

L20 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:941845 HCAPLUS
DOCUMENT NUMBER: 138:21334
TITLE: Protein, gene and cDNA sequences of a novel human protein kinase related to serine/**threonine kinase** and their uses in drug screening
INVENTOR(S): Yan, Chunhua; Li, Zhenya; Neelam, Beena; **Difrancesco, Valentina**; Beasley, Ellen M.
PATENT ASSIGNEE(S): PE Corporation (Ny), USA
SOURCE: U.S., 107 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6492156	B1	20021210	US 2001-984890	20011031
US 2003232408	A1	20031218	US 2002-274194	20021021
US 6706511	B2	20040316		
WO 2003038115	A2	20030508	WO 2002-US34869	20021031
WO 2003038115	A3	20040122		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1451310	A2	20040901	EP 2002-793863	20021031

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

US 2004137499 A1 20040715 US 2004-760407 20040121

PRIORITY APPLN. INFO.: US 2001-984890 A3 20011031
US 2002-274194 A3 20021021
WO 2002-US34869 W 20021031

AB The invention provides protein, cDNA and genomic sequences for a novel human protein kinase related to serine/**threonine kinase**. Specifically, a virtual northern blot shows serine/**threonine kinase** gene expression in brain (neuroblastoma), lung (small cell carcinoma), muscle (rhabdomyosarcoma), lymph (Burkitt lymphoma), ovary tumor, placenta (normal and choriocarcinoma), colon (normal, adenocarcinoma, and colon tumor), kidney (renal cell adenocarcinoma), breast, cervix (carcinoma), uterus tumor, pancreas (pancreatic islet), a pooled colon/kidney/stomach sample, and a pooled pancreas/spleen sample. Twenty eight single nucleotide polymorphism has been found on serine/**threonine kinase** gene that has been mapped to chromosome 11. The invention also relates to screening modulator of serine/**threonine kinase** and their uses in therapy. The invention further relates to methods, vector and hosts for expression of serine/**threonine kinase**.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 7 OF 7 EMBASE
on STN

ACCESSION NUMBER: 2001331033 EMBASE

TITLE: p160 Bcr mediates platelet-derived growth factor activation of extracellular signal-regulated kinase in vascular smooth muscle cells.

AUTHOR: Che W.; Abe J.-I.; Yoshizumi M.; Huang Q.; Glassman M.; Ohta S.; Melaragno M.G.; Poppa V.; **Yan C.**; Lerner-Marmarosh N.; Zhang C.; Wu Y.; Arlinghaus R.; Berk B.C.

CORPORATE SOURCE: Dr. J.-I. Abe, Center for Cardiovascular Research, Box 679, 601 Elmwood Ave, Rochester, NY 14642, United States. jun-ichi_abe@urmc.rochester.edu

SOURCE: Circulation, (18 Sep 2001) 104/12 (1399-1406).
Refs: 33
ISSN: 0009-7322 CODEN: CIRCAZ

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 005 General Pathology and Pathological Anatomy
018 Cardiovascular Diseases and Cardiovascular Surgery
029 Clinical Biochemistry

LANGUAGE: English

SUMMARY LANGUAGE: English

AB Background - The human Bcr gene was originally identified by its presence in the chimeric Bcr/Abl oncogene, which is causative for chronic myeloblastic leukemia. Because Bcr encodes a serine/threonine protein kinase, we studied its kinase activity and determined the role of Bcr in the PDGF signaling pathway to ERK1/2 activation and DNA synthesis in rat aortic smooth muscle cells (RASMCs). Methods and Results - In RASMCs, platelet-derived growth factor-BB (PDGF) stimulated Bcr kinase activity, with a maximum at 1 minute. Because phosphatidylinositol 3'-kinase(PI3-K) is essential for Bcr/Abl leukemogenesis, we evaluated the role of mouse PDGF-β-receptor binding sites for PI3-K (Y708, Y719) and for phospholipase C-γ (Y977, Y989) in PDGF-mediated Bcr kinase activation. The mutant PDGF receptor Y708F/Y719F but not Y977F/Y989F showed significantly reduced Bcr kinase activity. To determine the role of Bcr in PDGF-mediated signal transduction events leading to ERK1/2 and its downstream Elk1 transcription activation, wild-type (WT) and kinase-negative (KN) Bcr were transiently expressed in RASMCs. Bcr WT enhanced, whereas Bcr KN inhibited, PDGF-stimulated ERK1/2 and Elk1

transcriptional activity. Overexpression of Bcr also enhanced PDGF-induced Ras/Raf-1 activity and DNA synthesis, but this regulation is independent of the kinase activity of Bcr. Finally, we found that Bcr expression was increased in the neointimal layer after balloon injury of rat carotid artery. Conclusions - These results demonstrated the importance of Bcr in PDGF-mediated events, such as activation of Ras, Raf-1, ERK1/2, and Elk1, and stimulation of DNA synthesis.

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=> d his

     (FILE 'HOME' ENTERED AT 16:42:22 ON 11 JAN 2005)

     FILE 'MEDLINE, EMBASE, BIOSIS, BIOTECHDS, SCISEARCH, HCAPLUS, NTIS,
     LIFESCI' ENTERED AT 16:43:17 ON 11 JAN 2005
L1            19 S PFTAIRE (A)KINASE?
L2             8 S HUMAN AND L1
L3        422038 S SERINE OR THREONINE
L4         44212 S L3 (A)KINASE?
L5            51 S "PFTAIRE"
L6             8 S L4 AND L5
L7            20 DUP REM L5 (31 DUPLICATES REMOVED)
L8       6866200 S CLON? OR EXPRESS? OR RECOMBINANT
L9       4916861 S NEURON? OR NERV?
L10        25404 S L4 AND L8
L11         2385 S L9 AND L10
L12            8 S L5 AND L11
L13            2 DUP REM L12 (6 DUPLICATES REMOVED)
                 E YAN C/AU
L14         1084 S E3
                 E KETCHUM K A/AU
L15          230 S E3
                 E DIFRANCESCO V/AU
L16          116 S E3-E4
                 E BEASLEY E M/AU
L17          318 S E3
L18         1520 S L14 OR L15 OR L16 OR L17
L19            7 S L4 AND L18
L20            7 DUP REM L19 (0 DUPLICATES REMOVED)

=> s l5 and l18
L21            0 L5 AND L18

=> d his'
L21 HAS NO ANSWERS
L5            51 SEA "PFTAIRE"
L14         1084 SEA "YAN C"/AU
L15          230 SEA "KETCHUM K A"/AU
L16          116 SEA ("DIFRANCESCO V"/AU OR "DIFRANCESCO VALENTINA"/AU)
L17          318 SEA "BEASLEY E M"/AU
L18         1520 SEA L14 OR L15 OR L16 OR L17
L21            0 SEA L5 AND L18


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     (FILE 'HOME' ENTERED AT 16:42:22 ON 11 JAN 2005)

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L1            19 S PFTAIRE (A)KINASE?
L2             8 S HUMAN AND L1
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L4         44212 S L3 (A)KINASE?
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L5           51 S "PFTAIRE"
L6            8 S L4 AND L5
L7           20 DUP REM L5 (31 DUPLICATES REMOVED)
L8      6866200 S CLON? OR EXPRESS? OR RECOMBINANT
L9      4916861 S NEURON? OR NERV?
L10       25404 S L4 AND L8
L11        2385 S L9 AND L10
L12           8 S L5 AND L11
L13           2 DUP REM L12 (6 DUPLICATES REMOVED)
                E YAN C/AU
L14        1084 S E3
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L15         230 S E3
                E DIFRANCESCO V/AU
L16         116 S E3-E4
                E BEASLEY E M/AU
L17         318 S E3
L18        1520 S L14 OR L15 OR L16 OR L17
L19           7 S L4 AND L18
L20           7 DUP REM L19 (0 DUPLICATES REMOVED)
L21           0 S L5 AND L18
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	Issue Date	Pages	Document ID	Title
1	20041216	67	US 20040254094 A1	Suppression of cyclin kinase activity for prevention and treatment of infections
2	20041202	30	US 20040241856 A1	Methods and compositions for modulating stem cells
3	20041007	190	US 20040197792 A1	Novel Kinases
4	20040729	102	US 20040146924 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
5	20040603	45	US 20040106647 A1	Modulators of Cdk9 as a therapeutic target in cardiac hypertrophy
6	20040527	84	US 20040101874 A1	Targets for therapeutic intervention identified in the mitochondrial proteome
7	20040429	38	US 20040082613 A1	Modulators of Cdk9 as a therapeutic target in cardiac hypertrophy
8	20040429	84	US 20040081983 A1	Kinases and phosphatases
9	20040422	27	US 20040077009 A1	Human cyclin-dependent kinase (hPNQALRE)
10	20040415	130	US 20040073377 A1	Methods and compositions for regulating bone and cartilage formation
11	20040415	337	US 20040072160 A1	Molecular toxicology modeling
12	20040226	621	US 20040038292 A1	Wound healing biomarkers
13	20040212	570	US 20040029114 A1	Methods of diagnosis of breast cancer, compositions and methods of screening for modulators of breast cancer

	Issue Date	Pages	Document ID	Title
14	20040129	413	US 20040018969 A1	Nucleic acids, proteins, and antibodies
15	20040129	111	US 20040018513 A1	Classification and prognosis prediction of acute lymphoblastic leukemia by gene expression profiling
16	20040122	146	US 20040014040 A1	Cardiotoxin molecular toxicology modeling
17	20040108	345	US 20040005563 A1	Methods of diagnosis of ovarian cancer, compositions and methods of screening for modulators of ovarian cancer
18	20030904	21	US 20030166217 A1	Human cyclin-dependent kinase (hPFTAIRE)
19	20030703	64	US 20030124579 A1	Methods of diagnosis of ovarian cancer, compositions and methods of screening for modulators of ovarian cancer
20	20030508	119	US 20030087259 A1	Methods and compositions for regulating bone and cartilage formation
21	20030501	78	US 20030082511 A1	Identification of modulatory molecules using inducible promoters
22	20030130	100	US 20030022229 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
23	20020829	94	US 20020119544 A1	ISOLATED HUMAN KINASE PROTEINS, NUCLEIC ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES THEREOF

24	20020425	28	US 20020049181 A1	Novel internal ribosome entry site, vector containing same and uses thereof

	Issue Date	Pages	Document ID	Title
25	20040720	25	US 6764852 B2	Internal ribosome entry site, vector containing same and uses thereof
26	20040504	96	US 6730506 B2	Isolated human kinase proteins
27	20040316	434	US 6706867 B1	DNA array sequence selection
28	20021210	96	US 6492154 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
29	20020813	19	US 6432668 B1	Polynucleotides encoding human cyclin-dependent kinase (hPFTAIRE)

	Issue Date	Pages	Document ID	Title
1	20041202	30	US 20040241856 A1	Methods and compositions for modulating stem cells
2	20041007	190	US 20040197792 A1	Novel Kinases
3	20040729	102	US 20040146924 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
4	20040527	84	US 20040101874 A1	Targets for therapeutic intervention identified in the mitochondrial proteome
5	20040429	84	US 20040081983 A1	Kinases and phosphatases
6	20040422	27	US 20040077009 A1	Human cyclin-dependent kinase (hPNQALRE)
7	20040415	337	US 20040072160 A1	Molecular toxicology modeling
8	20040226	621	US 20040038292 A1	Wound healing biomarkers
9	20040212	570	US 20040029114 A1	Methods of diagnosis of breast cancer, compositions and methods of screening for modulators of breast cancer
10	20040129	413	US 20040018969 A1	Nucleic acids, proteins, and antibodies
11	20040129	111	US 20040018513 A1	Classification and prognosis prediction of acute lymphoblastic leukemia by gene expression profiling
12	20040122	146	US 20040014040 A1	Cardiotoxin molecular toxicology modeling

	Issue Date	Pages	Document ID	Title
13	20040108	345	US 20040005563 A1	Methods of diagnosis of ovarian cancer, compositions and methods of screening for modulators of ovarian cancer
14	20030904	21	US 20030166217 A1	Human cyclin-dependent kinase (hPFTAIRE)
15	20030130	100	US 20030022229 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
16	20020829	94	US 20020119544 A1	ISOLATED HUMAN KINASE PROTEINS, NUCLEIC ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES THEREOF
17	20040504	96	US 6730506 B2	Isolated human kinase proteins
18	20040316	434	US 6706867 B1	DNA array sequence selection
19	20021210	96	US 6492154 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
20	20020813	19	US 6432668 B1	Polynucleotides encoding human cyclin-dependent kinase (hPFTAIRE)

	Issue Date	Pages	Document ID	Title
1	20041216	67	US 20040254094 A1	Suppression of cyclin kinase activity for prevention and treatment of infections
2	20040729	102	US 20040146924 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
3	20030130	100	US 20030022229 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
4	20020829	94	US 20020119544 A1	ISOLATED HUMAN KINASE PROTEINS, NUCLEIC ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES THEREOF
5	20040504	96	US 6730506 B2	Isolated human kinase proteins
6	20021210	96	US 6492154 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof

	Issue Date	Pages	Document ID	Title
1	20041216	67	US 20040254094 A1	Suppression of cyclin kinase activity for prevention and treatment of infections
2	20040729	102	US 20040146924 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
3	20030130	100	US 20030022229 A1	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof
4	20020829	94	US 20020119544 A1	ISOLATED HUMAN KINASE PROTEINS, NUCLEIC ACID MOLECULES ENCODING HUMAN KINASE PROTEINS, AND USES THEREOF
5	20040504	96	US 6730506 B2	Isolated human kinase proteins
6	20021210	96	US 6492154 B2	Isolated human kinase proteins, nucleic acid molecules encoding human kinase proteins, and uses thereof

	L #	Hits	Search Text
1	L2	56918	serine or threonine
2	L3	55286	kinase$2
3	L4	7677	l2 same l3
4	L5	694595	clon$3 or express$3 or recombinant
5	L6	3113	l4 same l5
6	L7	457215	human
7	L8	1106	l6 same l7
8	L9	10	l1 and l8
9	L1	29	"PFTAIRE"
10	L10	88370	neuron or nerv$4
11	L11	20	l1 and l10
12	L12	14580	YAN KETCHUM DIFRANCESCO BEASLEY
13	L13	6	l1 and l12